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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/616,799	07/14/2000	Masatoshi Haraguchi	0828.64472	6615

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EXAMINER

GUBIOTTI, MATTHEW P

ART UNIT	PAPER NUMBER
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2124

DATE MAILED: 03/24/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/616,799

Applicant(s)

HARAGUCHI ET AL.

Examiner

Matthew Gubiotti

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 14 July 2000.

2a) ☐ This action is FINAL.

2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-20 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-20 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☒ All b) ☐ Some * c) ☐ None of:

1. ☒ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.

4) ☐ Interview Summary (PTO-413) Paper No(s). _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other:

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DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed July 14, 2000 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent. The abstract portions of Japanese patent documents #9062524 and #3077142 do not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information. It has been placed in the application file, but the information referred to therein has not been considered.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

3. Should applicant desire to obtain the benefit of foreign priority under 35 U.S.C. 119(a)-(d) prior to declaration of an interference, a translation of the foreign application should be submitted under 37 CFR 1.55 in reply to this action.

Specification

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5. Claims 1-20 are rejected under 35 U.S.C. 102(a) as being anticipated by Aho (Compilers: Principals, Techniques, and Tools, Addison Wesley Longman, 1986).

Claim 1

Aho teaches a method of facilitating optimization in a compiler substantially as claimed, comprising:

(a) storing, in a language-specific table ("symbol table", p.346, ¶ 1) rules specified for one or more programming language (p.344, § 6.1, ¶ 1; See also p.6, ¶ 3,4);

(b) analyzing a program code which includes one or more instructions, and is described in one of said one or more programming languages, based on said rules ("type checking"; p.343, ¶ 1; figure 6.1), to obtain a result embedded in said code ("type conversion"; p.359, ¶ 3);

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(c) embedding said result in said code (p.359, ¶ 3);

Claim 2

Aho teaches a method wherein said rules are stored as analyzing functions (p.351, fig.6.5). Aho further teaches step (b) comprising:

(d) reading out, from said table, at least one rule need for analyzing said program code ("lookup" operation, p.478, ¶ 3); and

(e) determining values of or relationships between variables included in said program code based on the rule(s) read out in step (d), and producing said result which included the determined values of or relationships between the variables ("type checking"; p.347, ¶ 6; p.348, § 6.2, ¶ 1).

Claim 3

Aho teaches a method wherein step (b) further comprises:

(f) at least one of said analyzing functions is a check function (p.347, ¶ 6; p.348, § 6.2, ¶ 1)

Claim 4

Aho teaches a method wherein step (b) is performed for each instruction set which is comprised of at least one of said one or more instructions (p.343, ¶ 1). Aho describes a method that checks that "the source program follows...the conventions of the source language." The source program comprises sets of

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instructions that each are subject to the method of Aho, as illustrated by the flow diagram in Figure 6.1 ; and

In step (c), the analysis result is embedded proceeding each instruction set in the code ("insert operations into the intermediate representation"; p.359, ¶ 4)

Claim 5

Aho teaches a method wherein said program code is source code (p.343, ¶ 1).

Claim 6

Aho teaches a method wherein said program code is intermediate code. (p.343, ¶ 6). The modular nature of the method taught by Aho ("static checking") enables it to be performed at various stages during compilation (p.589, ¶ 4; figure 10.3; "intermediate code generation can be folded into parsing"; p.463, ¶ 2 & figure 8.1), including following intermediate code generation and prior to final code generation (See p.13, figure 1.10).

Claims 7-12

These claims represent the apparatus claims representing the method disclosed in claims 1-6, respectively. They are rejected for the same reasons cited above, with the apparatus cited as follows (p.1, figure 1.1).

Claims 13-16

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These claims represent the product claims representing the method disclosed in claims 1-6. They are rejected for the same reasons cited above, with the product cited as follows (p.1, figure 1.1).

Claims 17-20

Aho teaches an analyzing unit executing the method disclosed in claims 1-6, as outlined above. Aho further teaches this unit as part of a compiler system comprising a unit performing a syntax analysis of code to produce intermediate code ("syntax analyzer"; p.13, figure 1.10) and an optimizing unit to optimize said code ("code optimizer"; p.13, figure 1.10).

As described above, the modular nature of the method taught by Aho enables it to be performed at various stages during compilation (p.589, ¶ 4; figure 10.3). This allows said method to be performed prior to or following intermediate code generation ("intermediate code generation can be folded into parsing"; p.463, ¶ 2 & figure 8.1).

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew

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Gubiotti whose telephone number is (703) 305-8285. The examiner can normally be reached on M-F, 8-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (703) 305-9662. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

MPG
March 17, 2003



JOHN CHAVIS
PATENT EXAMINER
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